



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,158	12/01/2003	Tapesh Yadav	037768-0109	9386
22428	7590	12/06/2005	EXAMINER	
FOLEY AND LARDNER LLP			KOSLOW, CAROL M	
SUITE 500			ART UNIT	
3000 K STREET NW			PAPER NUMBER	
WASHINGTON, DC 20007			1755	

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/724,158

Applicant(s)

YADAV, TAPESH

Examiner

C. Melissa Koslow

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

This action is in response to applicants' amendment of 20 October 2005. The amendment to specification has overcome the objections to the disclosure and the drawings. The replacement drawing of 20 October 2005 has overcome the objection to the drawings. The terminal disclaimer filed on 20 October 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of applications 10/441,501 and U.S. patents 6,830,822 and 6,849,109 has been reviewed and is accepted. The terminal disclaimer has been recorded. The amendment to the claims has overcome the rejections over U.S. patents 4,539,047; 4,927,466; 5,368,640 and 4,927,466. Applicant's arguments with respect to the remaining rejections have been fully considered but they are not persuasive.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3, 8, 10, 12, 14, 15 and 18-22 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. patent 4,629,513.

This reference teaches a thermally stable zinc oxide/zinc ferrite pigment used to color surface coatings, such as paint, ceramics, plastics and finishes. The Examples 1 and 2 teaches the size of the pigment is 0.05 micron (50 nm). This size range falls within defined particle size for the claimed nanopigments, which is less than 250 nm, and therefore one of ordinary skill in the art would expect the taught pigment to have a packing number that falls within the claimed range absent any showing to the contrary. The reference teaches the produced pigment is dried before it is added to the coatings, ceramics, plastics and finishes. Thus it teaches the process of claim 14. One of ordinary skill in the art knows that the pigment is mixed with the components for color surface coatings, ceramics, plastics and finishes and when it is used in a surface coatings, it is

Art Unit: 1755

known that the surface coating is coated onto an article to color the article. One of ordinary skill in the art knows that the addition of inorganic pigments to a pigments will enhance the hardness and toughness of the plastic. The taught pigment is thermally stable, which suggests that it will improve the fire resistance of the plastic to which it is added. Thus the taught pigment is multifunctional. The reference teaches the claimed process.

Applicant's arguments are not convincing since the taught pigment is inherently multifunctional. The rejection is maintained.

Claims 1, 2, 5, 10-12, 15 and 18-21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. patent 6,060,154.

This reference teaches a coating compositions for glass and plastic articles where the composition is coated onto the article. The composition comprises pigments having a particle size of 100 nm or less. This size range falls within defined particle size for the claimed nanopigments, which is less than 250 nm, and therefore one of ordinary skill in the art would expect the taught pigment to have a packing number that falls within the claimed range absent any showing to the contrary. The pigment can be combinations of iron oxides, titanium nitride and tantalum nitride (col. 2, lines 55-60). The coating composition is produced by mixing the pigment with the other components of the coating composition. The taught nitrides will also act as enhance the hardness of the coating. The reference teaches the claimed process.

Applicant's arguments are not convincing since the taught pigment is inherently multifunctional. The rejection is maintained.

Claims 1, 2, 6, 7, 9, 11-13 and 17-21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. patent 6,110,266.

Art Unit: 1755

This reference teaches an ink comprising mixtures of nitrides of titanium, zirconium, hafnium, silicon, germanium or tin having a particle size of 0.1-50 nm. The ink comprising mixtures of nitrides and organic pigments, both of which have a particle size of 0.1-50nm. This size range falls within defined particle size for the claimed nanopigments, which is less than 250 nm, and therefore one of ordinary skill in the art would expect the taught pigment to have a packing number that falls within the claimed range absent any showing to the contrary. The ink is applied to paper, which means the fibers in the paper are impregnated with the pigment in the ink, wood, plastic or textile, which is made of fibers. The taught nitrides will also act as enhance the hardness of the coating. The reference teaches the claimed process.

Applicant's arguments are not convincing since the taught pigment is inherently multi-functional. The rejection is maintained.

Claims 1, 4, 10, 12, 16, 18-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 5,164,007.

This reference teaches cement colored with a manganese ferrite pigment. The cement is colored with the ferrite by mixing the pigment with the components of the cement and the pigment is bonded to the cement when it is set. The pigment has a particle size in the range of 0.1-1 microns (col. 2, lines 3-4), which overlaps the defined size of "nanopigment" which is less than 250 nm. Product claims with numerical ranges which overlap prior art ranges were held to have been obvious under 35 USC 103. *In re Wertheim* 191 USPQ 90 (CCPA 1976); *In re Malagari* 182 USPQ 549 (CCPA 1974); *In re Fields* 134 USPQ 242 (CCPA 1962); *In re Nehrenberg* 126 USPQ 383 (CCPA 1960). Therefore, one of ordinary skill in the art would

Art Unit: 1755

expect the taught pigment to have a packing number that overlaps the claimed range absent any showing to the contrary. The reference suggests the claimed process.

Applicant's arguments are not convincing since the taught pigment is inherently multi-functional. The rejection is maintained.

Claims 1, 2, 4, 6, 8-10, 12, 15, 16, 18-20 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. patent 6,139,618.

This reference teaches an aluminum containing iron oxide hydroxide pigment, having a particle size of 0.005 to less than 0.1 micron. This size range falls within defined particle size for the claimed nanopigments, which is less than 250 nm, and therefore one of ordinary skill in the art would expect the taught pigment to have a packing number that falls within the claimed range absent any showing to the contrary. The taught pigment improves the thermal resistance of the material to which it is added and thus also acts as thermal insulation. The pigment is used to color inks, plastics, paints and building materials, which includes cements. The pigment is mixed with the inks, plastics, glass, ceramics and paints and the pigment is bonded with the cement. The reference teaches the claimed method.

Claims 1-3, 5, 8-10, 12, 15, 16, 18-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 6,485,557.

This reference teaches a manganese vanadium oxide pigments. The pigment reduces IR induced heat buildup, which means it also provides thermal insulation. The pigment is used to color inks, plastics, glass, ceramics, enamels and paints. The pigment is mixed with the inks, plastics, glass, ceramics and paints and the pigment is bonded with the enamel. The pigment has a particle size in the range of about 0.1-5 microns, which overlaps the defined size of

“nanopigment” which is less than 250 nm. Product claims with numerical ranges which overlap prior art ranges were held to have been obvious under 35 USC 103. *In re Wertheim* 191 USPQ 90 (CCPA 1976); *In re Malagari* 182 USPQ 549 (CCPA 1974); *In re Fields* 134 USPQ 242 (CCPA 1962); *In re Nehrenberg* 126 USPQ 383 (CCPA 1960). Therefore, one of ordinary skill in the art would expect the taught pigment to have a packing number that overlaps the claimed range absent any showing to the contrary.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Art Unit: 1755

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmk  
December 2, 2005

  
C. Melissa Koslow  
Primary Examiner  
Tech. Center 1700